

In the Specification:

Replace the paragraph beginning on p. 2, line 20, with the following amended paragraphs

-- The present invention is intended to create a new type of method in a production process, by means of which the process can be monitored more easily and accurately than previously. ~~The characteristic features of the invention are stated in the accompanying Claims.~~

Accordingly, a method for monitoring and analyzing a paper production process, in which the paper production process includes, as sub-processes:

a wet end, including

- stock preparation

- a head box

- a wire section, and

a dry end, including

- a press section, and

- a dryer section,

and in which method

a large number of variables are measured from the process, also including electro-chemical measurements in the wet end, and

with the aid of these variables, a fingerprint according to a good process situation, relative to runnability, is defined and then stored in a memory,

the stored fingerprints are compared with fingerprints obtained in a normal process situation,

on the basis of the comparison, an index of the difference, displayed graphically to the user, between the recorded good situation and the momentary process situation is defined, is characterized in that the definition according to a good process situation is made separately in several sub-processes, thus creating a deviation index for each sub-process, to be displayed to the user. A runnability index, depicting the runnability of the entire paper machine, may be further formed from the indices of the

sub-processes and a quality index, depicting the quality of the paper being produced, may also be formed for the user.

The method is also characterized in that at least the following deviation indices are formed for the user:

- a deviation index depicting the properties of the mass used in the process,
- an index depicting the operation of the head box, and
- an index depicting the operation of the wire section, and
- an index depicting the operation of the press section.

Deviation indices of at least two consecutive sub-processes may be formed for the user. In a paper machine, wet-end electrochemical measurements, for depicting printability and/or the permanence of ink/filler, are taken into account in the quality index.

Using a neural network, the system can be used under remote control.

The point of departure of the invention is to seek the causes of problems as quickly as possible. The paper machine is divided into sub-processes, with a method according to the document being applied to each of them.

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P. 9, line 9 insert the following paragraph

-- Although the invention has been described by reference to specific embodiments, it should be understood that numerous changes may be made within the spirit and scope of the inventive concepts described. Accordingly, it is intended that the invention not be limited to the described embodiments, but that it have the full scope defined by the language of the following claims. --;